

C APPENDIX C: SUMMARY OF EFFECTS

Measure	Final EIS Wiehle Avenue Extension	Changes in Effects (Final EIS vs. PE)	PE Wiehle Avenue Extension
COSTS¹			
Capital Costs (YOE)	\$1.521B	+ \$319M	\$1.840B
Capital Funding Sources ²	50% Federal 50% Non-Federal	No change	50% Federal 50% Non-Federal
Incremental Annual O&M Costs (YOE)	\$67.6M	No change	\$67.6M
TRANSPORTATION EFFECTS			
Transit Service			
Forecast Year Total Transit Ridership in Corridor ³	73,300 ⁴	No change	73,300 ⁴
Forecast Year Metrorail Ridership in Corridor ³	68,500	No change	68,500
Forecast Year New Transit Trips in Region ³	34,400	No change	34,400
Peak Period Headways for Metrorail (minutes)	7	No change	7
Off Peak Period Headways for Metrorail (minutes)	12	No change	12
Proposed Tysons Corner Bus Operations	New feeder service proposed to serve Metrorail stations and Tysons Corner area	None. Routing and arrival time changes would not affect operating costs or ridership	New feeder service proposed to serve Metrorail stations and Tysons Corner area; some re-routing of feeder buses near Tysons West Station and staggering of arrival times
Station Access	Two elevators provided at each station entrance; maintains accessibility in the event of an elevator outage	Modest reduction in accessibility for most passengers; considerable reduction in accessibility for disabled passengers	Second elevator at station entrance buildings eliminated; requires the provision of bus service to adjacent entrances in the event of an elevator outage

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Maintenance Facilities	Maintenance building expansion at West Falls Church S&I Yard; Dulles fleet maintained at West Falls Church Yard	None. Existing WMATA facilities will have sufficient excess capacity to maintain Dulles fleet until second phase of project complete	Eliminate maintenance building expansion at West Falls Church S&I Yard; Dulles fleet to be maintained at existing WMATA facilities
Roadways			
Regional Highway Operations	Minimal effect on traffic volumes	No change	Minimal effect on traffic volumes
Local Roadway Operations	Increased traffic in vicinity of stations with Parking or Kiss & Ride areas	Reduced delay in vicinity of Tysons West Station	Increased traffic in vicinity of stations with Parking or Kiss & Ride areas
Number of Intersections Requiring Mitigation	4	No change	4
Other Transportation Facilities			
Parking (increase over No Build)	1,500 spaces	No change	1,500 spaces
Bicycle and Pedestrian Facilities	No effect on existing and planned facilities Pedestrian and bicycle access would be provided for stations	No change	No effect on existing and planned facilities Pedestrian and bicycle access would be provided for stations
Air Transportation	No impact on operations at Dulles Airport	No change	No impact on operations at Dulles Airport
SOCIAL EFFECTS			
Land Use			
Compatible with Existing Land Use	Yes	No change	Yes
Compatible with Local Zoning	Yes, although special exceptions would be required at some station areas.	No change	Yes, although special exceptions would be required at some station areas.
Compatible with Planned Development	Partially	No change	Partially
Consistent with Comprehensive Plans	Partially. Plans assume high-capacity transit improvements for the full length of the Dulles Corridor.	No change	Partially. Plans assume high-capacity transit improvements for the full length of the Dulles Corridor.

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Neighborhoods and Community Facilities			
Community Cohesion	No Effect	No change	No effect
Changes in Population and Employment	Likely for neighborhoods within ½-mile of stations	No change	Likely for neighborhoods within ½-mile of stations
Access Changes	Pedestrian improvements near stations; localized increases in traffic volumes in vicinity of stations	No change	Pedestrian improvements near stations; localized increases in traffic volumes in vicinity of stations
Community Facility Impacts	1	No change	1
Property Acquisitions			
Private Residential Properties Acquired (No. parcels)	11	- 2	9
Private Commercial Properties Acquired (No. parcels)	37	+ 3	40
Government Properties Acquired (No. parcels) ⁵	14	+ 2	16
Displacements			
Residential Displacements (No.)	0	No change	0
Business Displacements Due to Project Facilities (No.)	3	- 2	1
Business Displacements Due to Construction Activity (No.)	n.d. ⁶	+6	6
Visual and Aesthetic Conditions			
Tysons Corner stations	Minimal effect	Modest increase at Tysons Central 7; Modest reduction at others	Minimal effect
Alignments in medians of Dulles Connector Road and DIAAH	Minimal effect	Modest reduction along Connector Road	Minimal effect
Alignments along Route 7 and Route 123	Minimal effect	Modest increase along Route 7	Minimal effect
Portals on Route 123 and Route 7	Minimal effect	Modest increase	Minimal effect
Wiehle Avenue Station	Minimal effect	Modest reduction	Minimal effect
West Falls Church S&I Yard improvements, including yard leads	Negligible effect	Modest reduction	Negligible effect
Cultural Resources			
Adverse Effects on Archaeological Sites	None	No change	None
Adverse Effects on Historic Architectural Properties	None	No change	None

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Parklands and Recreation Areas			
Adverse Effects on Parklands and Recreation Areas	None	No change	None
Resources Experiencing Minor Proximity Impacts (No.)	2	No change	2
Safety and Security			
Concerns beyond those typically accounted for in existing Metrorail system	None	No change	None
Environmental Justice			
Disproportionate Impacts to Minority/ Low Income Populations	None	No change	None
ENVIRONMENTAL EFFECTS			
Geologic Resources			
Geology and Topography	Minor effects	No change	Minor effects
Groundwater and Local Aquifers	Minor effects due to increase in impervious surface	No change	Minor effects due to increase in impervious surface
Sole Source Aquifers	No effect	No change	No effect
Soils	Minor effects	No change	Minor effects
Prime Farmland	No effect	No change	No effect
Water Resources			
Streams	7 streams crossed Minimal effects	Less proximity effects at Pimmit Run	7 streams crossed Minimal effects
Water Quality	Minimal effects	Less water quality effects at Pimmit Run and Scotts Run	Minimal effects
100-Year Floodplain	Bridge piers placed in 100-year floodplain for 3 streams No change in surface elevation anticipated	No change	Bridge piers placed in 100-year floodplain for 3 streams No change in surface elevation anticipated
Chesapeake Bay Preservation Areas	Minimal effects	Less effect at Scotts Run	Minimal effects
Wetlands Impacts (Acres)	0	No change	0
Biota and Habitat			
Aquatic Biota and Habitat	Minimal	No change	Minimal
Terrestrial Biota and Habitat	Minimal	No change	Minimal

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Effects on Rare, Threatened, and Endangered Species	None	No change	None
Critical Habitat for RTE Species	None	No change	None
Air Quality			
Conformity with SIP	Yes	No change	Yes
Contribution to Regional Goals	Partially. Plans assume high-capacity transit improvements for the full length of the Dulles Corridor.	No change	Partially. Plans assume high-capacity transit improvements for full length of Dulles Corridor
Reduced Vehicles Emissions vs. Existing Levels	Yes	Modest emissions increases at intersections along Route 7	Yes
NAAQS Violations	None	No change	None
Noise and Vibration⁷			
Noise Receptors Above FTA Criteria Before Mitigation (No.)	184	No change	184
Noise Receptors Above WMATA Criteria Before Mitigation	48	No change	48
Vibration Receptors Above FTA Criteria Before Mitigation (No.)	7	- 1 receptor	6
Groundborne Noise Receptors Above FTA Criteria (No.)	15	- 1 receptor	14
Vibration Receptors Above WMATA Criteria Before Mitigation	15	- 1 receptor	14
Hazardous and Contaminated Materials			
Sites of Concern Potentially Affected	4	No change	4
Energy			
Percent Change in Direct Energy Usage from No Build Alternative	+0.04%	No change	+0.04%
SECONDARY AND CUMULATIVE EFFECTS			
Potential for Effects Related to Secondary Development			
Effect on Overall Growth in Fairfax County	Minor increase Refocuses previously anticipated growth into areas with more transportation options	No change	Minor increase Refocuses previously anticipated growth into areas with more transportation options
Increased Demand on Community Facilities and Public Services	Yes	No change	Yes

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Effect on Transportation	Increased traffic volumes near stations Increased transit mode share Increased pedestrian and bicycle trips to stations	No change	Increased traffic volumes near stations Increased transit mode share Increased pedestrian and bicycle trips to stations
Change in Visual Character	Yes, due to denser development near stations in Tysons Corner and Wiehle Avenue	No change	Yes, due to denser development near stations in Tysons Corner and Wiehle Avenue
Contribution of Project to Cumulative Effects			
Water Resources	None Project has no major long-term effects on resources	No change	None Project has no major long-term effects on resources
Air Quality	None Project in conformance with Virginia SIP	No change	None Project in conformance with Virginia SIP
Historic Resources	None Project has no adverse effect on resources	No change	None Project has no adverse effect on resources
Section 4(f) Resources	None Project would not make use of resources	No change	None Project would not make use of resources

Notes:

- 1 "B" – Billions, "M" - Millions.
- 2 Non-federal refers to monies that would come from local jurisdictions as well as the Commonwealth of Virginia.
- 3 Average weekday riders.
- 4 Includes 4,800 express bus riders that would not transfer to Metrorail.
- 5 Government Properties include approved proffers to be conveyed to governmental entity.
- 6 Not documented in the Final EIS.
- 7 Planned mitigation measures will reduce impacts below FTA criteria.